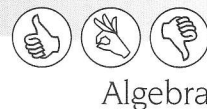


82 Find the Number



Algebra

A Guess and Check

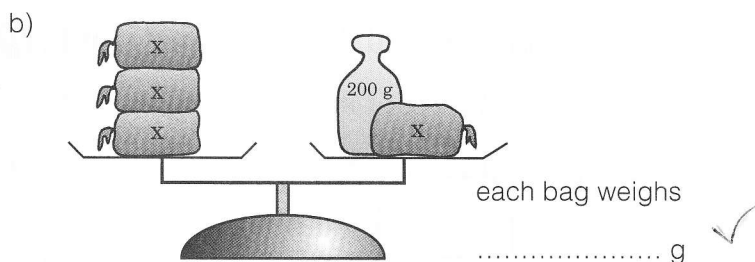
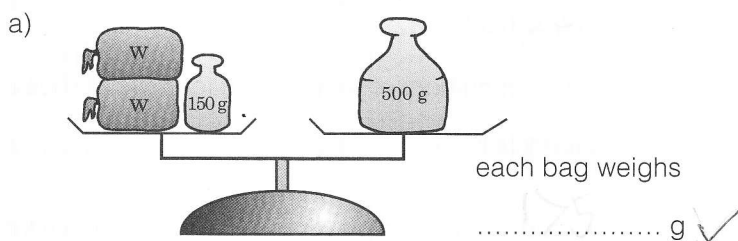
- 1 What number must go in the box to make the sentence true.

a) $\square + 2.5 = 4$ b) $5.2 - \square = 2$ ✓

c) $3 \times \square = 216$ ✓ d) $\square \times 20 = 320$ ✓

e) $\frac{\square}{5} = 15$ f) $\frac{\square}{10} = 1.2$

- 2 Work out the weight of the bags on these balances. Bags on the same balance have the same weight.



B Monkey Business

- 1 Riddle : 'Why does a monkey scratch itself?'

To decode the answer solve the problems and put the letter above its answer in the lines below.

$K - 4 = 16$, $K = \dots\dots\dots$ $W \times 5 = 45$, $W = \dots\dots\dots$

$2 \times H = 28$, $H = \dots\dots\dots$ $27 + N = 44$, $N = \dots\dots\dots$

$11 - Y = 3$, $Y = \dots\dots\dots$ $48 \div R = 12$, $R = \dots\dots\dots$

$E \div 7 = 4$, $E = \dots\dots\dots$ $I \times 8 = 0$, $I = \dots\dots\dots$

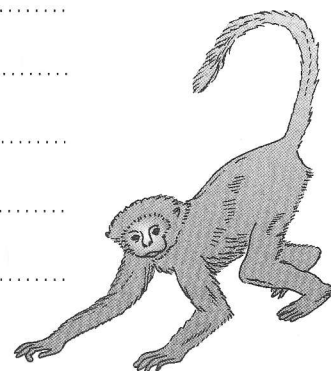
$2 \times T + 4 = 10$, $T = \dots\dots\dots$

$40 - 3 \times O = 22$ $O = \dots\dots\dots$

$\frac{23 + C}{7} = 4$ $C = \dots\dots\dots$

$(S - 3) \times 2 = 16$ $S = \dots\dots\dots$

$\frac{L}{3} + 1 = 6$ $L = \dots\dots\dots$



$\overline{6} \quad \overline{17} \quad \overline{15} \quad \overline{8} \quad \overline{14} \quad \overline{28} \quad \overline{20} \quad \overline{17} \quad \overline{6} \quad \overline{9} \quad \overline{11}$

$\overline{9} \quad \overline{14} \quad \overline{28} \quad \overline{4} \quad \overline{28} \quad \overline{0} \quad \overline{3} \quad \overline{0} \quad \overline{3} \quad \overline{5} \quad \overline{14} \quad \overline{28} \quad \overline{11}$ ✓

C Odd Jobs

- 1 Last week Bevan earned just \$1.50 short of \$30. How much did Bevan earn?

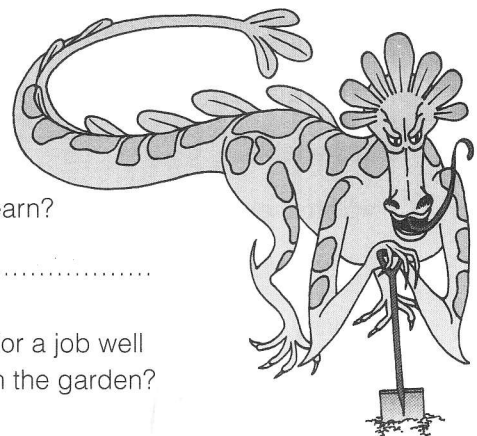
..... ✓

- 2 Megan worked in Gran's garden at \$6 per hour. Gran gave her \$8 extra for a job well done, making her pay a total of \$50. How many hours did Megan work in the garden?

..... ✓

- 3 Anne and Ryan agreed to paint the shed for a certain amount of money which they divided evenly between them. Afterwards Ryan also painted the doghouse for \$20. Altogether Ryan earned \$67.50. How much did Anne and Ryan get paid for painting the shed?

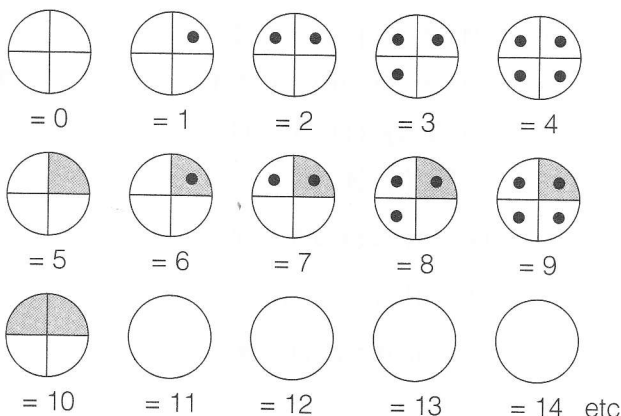
.....





A Tribe in the Jungle

- 1 This is the numbering system used by the *Button* tribe. Fill in the blank circles at the end (11 to 14).



- 2 To find out what each symbol means Dr Livingston uses this rule :



means $1 \times 5 + 2 = 7$

- a) means $\times 5 + \dots = \dots$

- b) What is the highest number that can be made with one circle in this numbering system?



means..... $\times \dots + \dots = \dots$

C Cupcakes

In all these questions, c represents the number of cupcakes baked in cooking classes.



- 1a) Kiri shared her cupcakes evenly with a sick friend. Kiri's share was 15 cupcakes. Circle the number sentence (A, B, C or D) which represents this information?

A $2 \times c = 15$

B $\frac{c}{2} = 15$

C $c - 2 = 15$

D $c - 15 = 2$

- b) How many cupcakes did Kiri bake?

- 2a) At lunchtime Tristan and his mate ate 12 of the cupcakes he had baked. He has only 4 left. Circle this number sentence.

A $12 - c = 4$

B $c + 4 = 12$

C $c - 12 = 4$

D $c - 4 = 12$

- b) How many cupcakes did Tristan bake?

- 3a) Kylie puts 3 M&Ms on each of her cupcakes. She used a total of 96 M&Ms. Circle the number sentence for this.

A $c \times 3 = 96$

B $c + 3 = 96$

C $c + 3 = 96$

D $c - 3 = 96$

- b) How many cupcakes did Kylie bake?

B Sequences

- 1 A number sequence starts with 4, 2, ... Continue the sequence in two different ways. Give the rule for each.

a) 4, 2,,, Rule : Start with 4, then

b) 4, 2,,, Rule : Start with 4, then

- 2 The *Fibonacci Sequence* is a famous sequence. The first two terms are both 1, then each following term is found by adding the two terms directly in front of it. Continue the *Fibonacci Sequence* with 4 more terms.

1, 1, 2, 3, 5, 8,,,

- 3 Jordan started a sequence with the numbers 1 and 8. He called it the *Sequence of Cubes*. Write down 3 more numbers in Jordan's sequence.

1, 8,,,

- 4 Give the first 5 numbers of the *Sequence of Primes*.

.....,,,,